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AUTHOR Gilles, Cynthia
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ABSTRACT

The status report includes a summary and analysis of manpower information collected during the first year of the Massachusetts Special Education Manpower Project and offers some recommendations relative to special education manpower development. Section I focuses on variables affecting special education personnel supply/demand such as P.L. 94-142 (Education for All Handicapped Children Act); numbers, ages, and classification of children with special needs; and fiscal constraints. A second section considers the supply of special education related personnel. The demand for special education related personnel is discussed in a third section as it relates to such areas as percentages of children with special needs served in different prototypes, personnel placement problems, and inservice training needs. A fourth section considers the supply/demand balance for various types of professionals (including teachers, administrators, and other specialists). Final sections review state and federal special education training priorities and recommendations. (SBH)

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SPECIAL EDUCATION MANPOWER IN MASSACHUSETTS

STATUS REPORT AND RECOMMENDATIONS

JULY, 1976

Special Education Manpower Project
Division of Special Education
Massachusetts Department of Education

Cynthia Gilles, Project Director

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SPECIAL EDUCATION MANPOWER IN MASSACHUSETTS

STATUS REPORT AND RECOMMENDATIONS

July, 1976

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INTRODUCTION

Massachusetts' comprehensive special education law, Chapter 766 was enacted in July, 1972, to become effective September 1, 1974. During the year prior to this implementation date, concern arose regarding possible shortages of qualified personnel needed to provide special education services to all eligible children. The Secretary of Education established a Special Education Manpower Committee to survey the status of supply and demand for personnel in special education and related areas. As a result of the Committee's recommendations, Federal funds were sought to support a three-year manpower planning project, designed to address several problem areas.

The Massachusetts Special Education Manpower Project, funded by the Bureau of Education for the Handicapped (BEH), USOE, began its first year of operation on July 1, 1975.

Project Goals are:

- (1) To ensure availability of adequate numbers of competent special education related personnel to serve all children with special needs in Massachusetts (and New England), through development and implementation of short and long range plans for (1) balancing special education manpower supply and demand (quality and quantity) and (2) maximizing efficient utilization of training resources.
- (2) To develop an operational Information/Decision System Model for cooperative special education manpower planning and an analysis of the model development process which can be adapted by other states in developing manpower planning strategies.

Principal Project Objectives include:

- (1) To develop an Information System to (a) compile and analyse data on existing and projected special education manpower supply and demand, training needs and resources and (b) to disseminate relevant and timely data to concerned decision-makers.
- (2) To develop a Linkage System to facilitate (a) communication, (b) coordination of planning and decision-making and (c) sharing of resources, involving all sectors concerned with special education manpower development (institutions, agencies, and organizations).
- (3) To develop and initiate implementation of short and long range plans for (a) balancing special education manpower supply and demand (quality and quantity) in all areas of specialization, and (b) maximizing efficient utilization and sharing of training resources. (Second Project Year)

- (4) To develop mechanisms for coordination of special education manpower planning and placement efforts between all New England states (Third Project Year).

In addition, the Project is designed to implement the BEH-USOE concept of cooperative planning between the State Education Agency and Colleges/Universities and other agencies which prepare special education personnel.

Although the Project has developed a substantial base of manpower data for planning, some necessary data is not yet available. A limited number of additional data collection strategies will be developed during the coming year. To the greatest extent possible, this will involve modification of existing data collection procedures already established in various agencies. The Project will continue to streamline its procedures for disseminating special education manpower information to planners concerned with special education manpower development and utilization.

The Project has organized the majority of groups in its Linkage System designed to coordinate manpower planning and facilitate sharing of information and training resources. Three additional groups will be developed during the second Project year.

This status report includes a summary and analysis of manpower information collected during the first Project year and some recommendations relative to special education manpower development.*

A - VARIABLES AFFECTING SPECIAL EDUCATION PERSONNEL SUPPLY/DEMAND

Chapter 766 is a mandate for rapid and complex change affecting public schools, institutions of higher education, and many other public and private agencies. Several clusters of significant variables must be considered in assessing needs for special education related personnel to fully implement the law. These include the following:

* For more detailed data reports, and information on the Project's Information and Linkage Systems contact:

Cynthia Gilles, Project Director

or

Andy Flajole, Administrative Assistant
Special Education Manpower Project

Division of Special Education
31 St. James Avenue
Boston, Mass. 02116
617-482-7940

1 - Federal Legislation P.L. 94-142

Recently enacted Federal legislation, P.L. 94-142 constitutes a national "right to education" mandate, similar to the Massachusetts law in many respects but with two significant differences. The Federal law provides for gradually increasing Federal support of programs for handicapped children up to a level of 40% by the fiscal year ending September 30, 1982. However, the number of children aged five to seventeen years who may be counted as handicapped in determining the state funding level is limited to 12% of the total number of children of this age in the state. (Pre-school children and those over 17 years of age are covered separately). The other major difference between Chapter 766 and the Federal law, as well as laws and court decisions in other states, is the Massachusetts mandate to discontinue use of categorical labels. 94-142 also requires the development of a state plan for manpower development (fortunately, this was already a primary objective for the second year of the Manpower Project). Although P.L. 94-142 has substantial implications for manpower planning, it is too early to fully assess its potential impact.

2 - Numbers, ages and classifications of children with special needs:

Traditionally, personnel needs projections have been based on average incidence figures for various categories of handicap. The Chapter 766 mandate to serve all children with special needs over the expanded age range of 3-21 years has resulted in a rapid expansion of numbers of children requiring special services. The law also mandates the use of a single term, "children with special needs," to replace traditional categorical labels, and a shift to a process-oriented definition of special needs. (A child has special needs if his/her parents and other members of the Core Evaluation Team agree that he/she requires special education services). These changes in pupil classification categories and procedures have resulted in considerable variation in special needs incidence figures between different school systems. In addition, there are substantial differences between the census figures for children with special needs in the October School System Reports and in the reimbursement claims based on reported census for the end of the prior school year.

On the basis of unaudited 1974-75 fiscal reports from Massachusetts school systems, special needs incidence figures vary from 2% to >25% of total school enrollments. (By way of comparison, incidence figures resulting from studies in other states include: Kentucky - 6.95% (1971); Alabama - 13.73% (1972); Northwest Minnesota - 10.77-11.77% (1972); Nebraska - 24.5% (1972-73); North Dakota - 18.43% (1972-73); Colorado - 15.6% (1973); New Mexico - 29.03% (1973); Idaho - 15.21% (1973-74); estimate by the Bureau of Education for the Handicapped, USOE - 12.35% (1974).

3 - Special education service delivery: models and types of services required:

Pupil: personnel ratios vary considerably within and between prototypes, as do service delivery models which bear the same label, e.g., resource rooms. Schools have been given responsibility for providing a broader range of services for children with special needs - generating needs both for greater numbers of personnel and additional kinds of personnel.

4 - Special education personnel classifications and roles of regular and special education personnel:

Special education personnel classifications were finally changed in January, 1975 to more nearly approximate the non-categorical emphasis of the law.. New procedures for credentialling of personnel, through approval of training programs, were instituted at the same time. For these reasons, all Massachusetts special education training programs have been undergoing varying degrees of reorganization. Changes in special education personnel classifications have generated some confusion, particularly in the public schools. Changes in special education service delivery models, with emphasis on "mainstreaming," have necessitated changes in roles of regular education and special education personnel. Demands have increased for special education personnel trained in comparatively new roles; Generic (consulting) teachers, teachers of Children with Severe Special Needs, secondary level and bilingual special education teachers.

In analysing personnel data, both qualitative and quantitative aspects must be considered. For example, (1) the area of Moderate Special Needs is currently in substantial oversupply in Massachusetts. Although this area combines several former special education categories, the majority of surplus personnel have qualified for approval as Teachers of Children with Moderate Special Needs on the basis of training in a single categorical area of specialization, (2) professional standards are intended to establish a minimum level of quality of preparation for personnel who teach in public schools. However, their application poses some contrasting problems. On one hand, many personnel in some areas of specialization may never teach in public schools, e.g., early childhood special education. But a public school teacher of 3-4 year olds must hold an elementary education (K-6) certificate. In contrast, special education approval is not required for personnel in some programs supported in part or entirely by public funds, e.g., institutional schools, private schools (through tuition), and the majority of educational collaboratives.

5 - Relationships of Education and Human Services agencies:

Some types of education-related services are provided by several public agencies. as well as private agencies, e.g., physical therapy, psychological assessment, etc. Special Education personnel needs must be assessed not only in education agencies but also in other public/private agencies, in order to generate a comprehensive picture of personnel supply and demand.

6 - Declining enrollments:

Recent Massachusetts Department of Education enrollment projections for public schools (Oct., 1975) indicate an estimated decline of 54,450 pupils within a time span of five years (from 1,206,590 in 1974-75 to 1,152,140 in 1978-79). This enrollment decline is confined to grades 1-6 (-14%) and 7-8 (-2%) while grades 9-12 will increase (+7%). One obvious effect of declining enrollments is a concomitant decrease in numbers of children requiring special services. A less apparent secondary effect has significant implications for special education manpower planning. Tenured regular education personnel, whose positions are eliminated due to declining enrollments, are sometimes transferred into new special education positions. The final Boston teachers contract (October, 1975) included an explicit agreement to this effect.

7 - Pending Further Changes in Personnel Classifications:

Massachusetts Chapter 847 (Acts of 1973) provides for major reform in credentialing of all educational personnel. The 847 Commission is currently developing recommendations for complete reorganization of existing classifications of educational personnel, as well as certification procedures. It is not clear when these recommendations will be implemented, due to current fiscal constraints, but they could have significant effects on special education personnel planning.

8 - Fiscal Constraints

Within a period of a few months, beginning late in 1974, Massachusetts moved into a state of fiscal crisis. Although the immediate problems were resolved, others continue to arise. These fiscal constraints had significant effects on budgets for public higher education, and resulted in a "freeze" on hiring of any new faculty, including filling of vacated positions. In addition, Chapter 70 (state funds for public elementary/secondary education) is funded below full entitlement. No new funds were appropriated to cover costs of Chapter 766 in the public schools. A number of towns have experienced "taxpayer revolts," with school committees elected on the basis of promises to hold down school budgets. These fiscal constraints have generated discrepancies between "ideal" and "real" needs for special education personnel, i.e., between number of positions needed and number approved in the school budget.

9 - Elasticity of Special Education Manpower Market:

The term "elasticity" is used to denote the extent to which manpower substitution can occur, i.e., the capability of individuals to interchange between a number of occupational areas.

The need for special education manpower planning has been recognized comparatively recently at both state and national levels. Although little technical literature is available in this specific area, certain manpower planning concepts and approaches which have been developed in other areas may be adapted for use in special education. Two commonly used manpower planning models are based on contradictory assumptions regarding the elasticity of the manpower market. The more popular Manpower Requirements Approach (MRA), commonly used in the United States, assumes that little elasticity of substitution exists between different occupational areas. Needs are projected and plans designed to develop necessary manpower to achieve stated goals. In contrast, the Rate of Return Approach (RRA) assumes infinite elasticity of substitutions.

In developing longer range plans for special education manpower development in Massachusetts, considerable elasticity in the manpower market must be assumed for several reasons:

- a - Recent changes in roles and classifications of special education personnel have resulted in considerable variation in role definitions for new categories of personnel, e.g., Generic teachers. While new roles are evolving, old roles are being redefined. For example, some school psychologists, Vision and Audition teachers, speech therapists and other specialized personnel are now expected to function more extensively as consultants to teachers.

- b - Changing special education service delivery models are generating changing demands for personnel. Many personnel are shifting from one role classification to another without additional preparation to meet the demands of new roles, e.g., elementary education teachers to preschool programs, special class teachers to resource rooms, etc. Responsibilities of personnel in a particular classification may vary substantially from one setting to another, even within the same system. Specific 766-related responsibilities may be assigned to a variety of personnel, e.g. parent interviews may be conducted by social workers, school nurses, school psychologists, guidance counselors, or educators. School systems may hire special education personnel (e.g., Moderate Special Needs teachers) as regular classroom teachers since they are both approved in special education and certified in regular education.
- c - Source and training of new personnel constitute additional dimensions of elasticity in the manpower market. Some personnel trained in Massachusetts move out-of-state and personnel trained out-of-state move in. Since Special Education Professional Standards apply only to personnel employed in public schools, training backgrounds of personnel employed in other sectors may vary considerably.

For the above reasons, it is neither desirable nor possible to attempt to closely balance numbers of personnel training in Massachusetts with numbers of personnel needed. However it is important to identify existing gross discrepancies between supply and demand and to attempt to minimize extensive imbalances in the future.

10 - Data Limitations:

The data summarized in this report are the best information which Manpower Project Staff was able to collect during the past year. However, data is subject to some limitations. In a few cases, data are both complete and accurate, e.g., numbers of personnel approved and certified in special education areas. In other areas, the data are fairly complete but not audited. Accuracy and totals depends upon the validity of data reported by numerous school systems and other institutions. In some instances, formal and informal sampling procedures have been used to collect types of data otherwise unavailable. Certain types of needed data are not available in any form. In the following sections, information of various types is combined to provide an overview picture of special education personnel supply and demand in Massachusetts.

B - SUPPLY OF SPECIAL EDUCATION RELATED PERSONNEL

Several types of data must be considered in developing estimates of current and future supplies of special education related personnel. These include numbers of students planning to enter the field, numbers of students enrolled in Massachusetts training programs, numbers of personnel currently employed, numbers of trained personnel seeking jobs but unemployed, numbers of personnel obtaining approval/certification, numbers of trained personnel moving in and out-of-state, and program development plans of Massachusetts training programs.

1 - Vocational Intent Data:

a - The Admissions Testing Program (ATP) of the College Entrance Examination Board (CEEb) Summary Reports provide data on a substantial sample of Massachusetts College Bound Seniors. In 1974-75 a detailed list of intended fields of study of college-bound seniors was included in the student descriptive questionnaire (SDQ). Of the 60,902 students who registered for SAT or Achievement tests, 48,847 (80.2%) completed this questionnaire. Of the students completing the questionnaire 36,535 (75%) were seniors. Vocational intent data was tabulated for seniors only.

TABLE 1

TABLE 1

COMPARATIVE DATA ON FRESHMEN CLASS - FALL, 1975
(CEEb-ATP-SDQ Data for Massachusetts)

STUDENT CLASSIFICATION	Senior Year College - Bound Students		Prospective Applicants Massachusetts State Colleges		Prospective Applicants - Massachusetts Public Higher Ed. System	
No. of high school seniors who responded to the questionnaire	36,535		15,144		33,503	
Vocational Intent	No. Students	%	No. Students	%	No. Students	%
Education - total %		11.7		21.		12.5
Spec. Ed. { Excep. Child Ed.	406	1.1	346	2.3	422	1.3
Ed. - Deaf	107	0.3	80	0.5	102	0.3
Ed. - Ment. Retarded	449	1.2	407	2.7	466	1.4
Speech & Hearing	113	0.3	81	0.5	117	0.3
Child Development	422	1.2	306	2.0	409	1.2
Elementary Ed.	606	1.7	513	3.4	629	1.9
General Ed.	81	0.2	49	0.3	70	0.2
Physical Ed.	811	2.2	577	3.8	749	2.2
Secondary Ed.	126	0.3	91	0.6	138	0.4
Psychology - total %		3.4		4.2		3.8

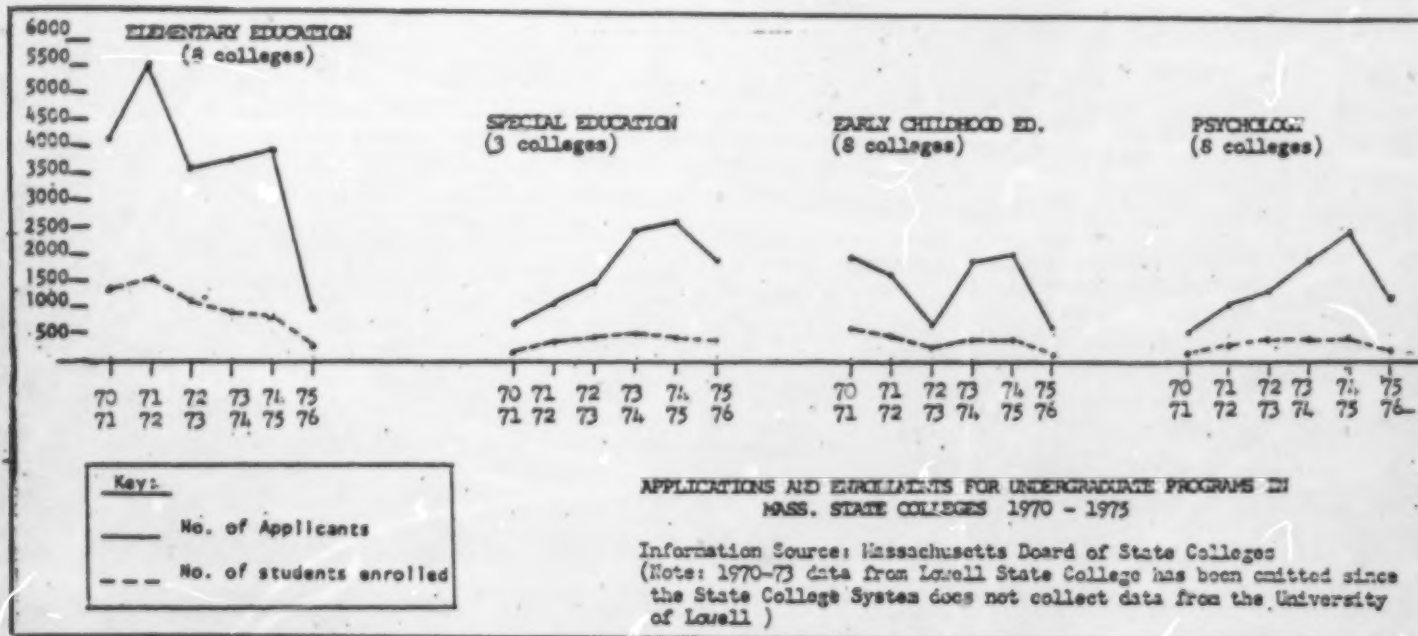
Clearly a substantial proportion of students intended to enter a special education field (See Table 2). Unfortunately, comparable data is not available for prior years.

TABLE 2

	% of Students Intending to Enter Education	% of all Education Students Intending to Enter Special Education
Senior Year College Bound Students (1974-75)	11.7%	24.8%
Mass. State College System Prospective Freshmen Class 1975	21%	28.6%
Mass. Public High Education System Prospective Freshmen 1975	12.5%	26.4%

b - Numbers of applicants and students enrolled in State College undergraduate programs provide some insight into current trends in career selection. Numbers of special education applicants over a 5 year period are compared with applicants in three other areas of specialization. The number of applicants to undergraduate special education programs reached its peak for the academic year 1974-75 and has begun to decline.

FIGURE 1



These degree programs are based in 24 public and private Massachusetts institutions of higher education. Numbers of students trained are approximately evenly divided between public and private sectors. Although this data provides an overview of supply in various areas of specialization, the following cautions should be observed in analyzing the information:

- (1) Although the majority of undergraduate students attend school full-time, a substantial proportion of graduate students are concurrently employed. Out of a group of 1250 graduate level students in various areas of specialization at 14 Colleges/Universities, 51% were employed.
- (2) Enrollment data are incomplete in a few areas of specialization although nearly all programs are included in the 1975-76 survey.
- (3) Some program graduates will migrate out-of-state. Follow-up data on graduates is not available from a number of programs. Although many programs hope to place a substantial proportion of their graduates within Massachusetts, some are designed to respond to regional and national needs (e.g., in areas of low incidence special needs).
- (4) Until August 31, 1977, special education personnel may still obtain approval as Teachers of Children with Moderate Special Needs by meeting the coursework requirements in former categorical areas of specialization (ED, or MR)*. Students may complete required coursework without being enrolled in degree programs (several additional institutions offer coursework but no degree programs). This number of students is particularly large during the current year because a substantial number of personnel currently approved as Instructors (tutors) of the Perceptually Handicapped are completing the old course requirements for certification as teachers of the moderately retarded in order to obtain approval in the area of Moderate Special Needs.

b - Community College Programs (1974-75 data)

Table 4 (See next page) summarizes enrollments in special education related fields at 15 Massachusetts Community Colleges. Data for 1975-76 has been requested but not yet received.

* If all requirements were met prior to September 1, 1976.

TABLE 4

COMMUNITY COLLEGE PROGRAM ENROLLMENTS IN SPECIAL EDUCATION - RELATED FIELDS - 1974*		
<u>Allied Health Programs:</u>	Number of Programs	Total # of Students
Rehabilitation Technology	1	35
Occupational Therapy Tech.	2	82
Physical Therapy Asst.	3	85
Mental Health Technology	3	130
Mental Health, Tech., Other	4	258
<u>Service Occupations**</u>		
Care and Guidance of Children	9	613
Instructional Aide	1	37
<u>Human Services!</u>	3	381
* SOURCE: Massachusetts Board of Community Colleges, December 1974		
** These are primarily in general education but a few are special education related.		

3 - Currently Employed Special Education Related Personnel

Several types of agencies employ special education related personnel: public schools, collaboratives, private schools, institutional schools, human services agencies and other private agencies. As previously noted, no standard procedures exists for collecting data on personnel employed in most of these sectors, although the Manpower Project is seeking to develop necessary data collection strategies. Data is available on public school personnel and institutional school staff.

a - Special Education related personnel in public schools:

The majority of special education teachers are employed in the public schools. Due to the changes in classifications of special education teachers and expansion of types of personnel employed by public schools (e.g., physical therapy) it is not possible to graph trends in staffing patterns. Data in Table 5 is derived from the System Staff Report section of the October 1, 1975 School System Summary Report.

NOTE: This data has not yet been audited and does not include data from 21 systems which have not yet sent in their report. (Total enrollments in these systems constituted approximately 3.4% of the statewide total in 1973-74).

TABLE 5

PRELIMINARY REPORT*

SPECIAL EDUCATION AND RELATED PERSONNEL

EMPLOYED IN MASSACHUSETTS PUBLIC SCHOOLS 1975-76**

	Elementary		Secondary		TOTALS	
	FT	PT	FT	PT	FT	PT
Generic Special Teacher	316	40	192	6	508	46
Moderate Special Needs Teacher	1046	92	629	48	1675	140
Severe Special Needs Teacher	405	18	225	1	630	19
Audition Teacher	90	14	31	12	121	26
Vision Teacher	47	30	13	10	60	40
Perceptually Handicapped -Instr.	630	262	223	97	853	359
Special Education Director					179	87
Guidance Counselors ***	358	32	1688	45	2046	77
School Adjustment Counselor ***	299	31	124	9	423	40
Speech Therapist					527	124
Psychologists					267	151
Physicians ***					14	361
Nurses ***					821	100
Occupational Therapists					19	9
Physical Therapists					7	4
Social Workers					63	13
Instructional Teacher Aide *** (includes regular and SPED)	2662	1379	709	328	3371	1707
* NOTE: This data has not yet been audited - totals from 21 school systems are not included. ** Data compiled by Division of Research, Planning and Evaluation, Massachusetts Department of Education from October 1, 1975 School Summary Report *** Some of these personnel are not involved in special education						

b - Special Education related personnel in Institutional Schools:

Table 6 includes Bureau of Institutional Schools (BIS) staff employed under 03 and 07 Contracts as well as those holding state positions. BIS personnel classifications vary considerably from public school personnel classifications.

TABLE 6

BUREAU OF INSTITUTIONAL SCHOOLS STAFF (including C3 & 07) 1975-1976

<u>Positions</u>	<u>Number</u>	<u>Positions</u>	<u>Number</u>
Head Teacher	4	Rehabilitation Counselor	2
Institutional School		Rehabilitation Therapist	1
Teacher	178	SFSD Supervisors	3
Educational Specialist	16	Principals	7
Developmental Day Care			
Specialists	25	Paraprofessionals	38
Speech Pathologists	6	Program Coordinators	8
Vocational Ed Teacher	30	Social Worker	15
Recreation Therapist	33	Occupational Therapist	28
Physical Therapist	2	Physical Therapist	18
Psychologist	11		

TOTAL: 427

4 - Special Education Personnel Certified/Approved, July 1, 1975 - June 30, 1976
- Numbers and Characteristics (Flow Data)

- a - Numbers of personnel approved in various areas of specialization - See Table 7. Data on numbers of personnel certified in the areas of Speech and Psychology are not yet available for the current year.
- b - Flow data on personnel approved in various areas of special education has been tabulated from application forms. (Comparable data is not available for personnel certified in the areas of Speech and Psychology). Data include the following characteristics of approved personnel: area of specialization, current employment site and area and level of specialization; age, sex and marital status; current geographic location and willingness to relocate; highest degree earned, where earned and major area of concentration; status of certification for current employment; current involvement in a training program. Detailed tables and figures on all of the data are available in a separate report.

NOTE: In the following tabulations, percentages indicate proportion of any subclassification relative to totals for all approved personnel (3844 = 100%).

Several aspects of the data are of particular interest:

- (1) Of the 3844 personnel who received special education approval, 51% were in the area of Moderate Special Needs Teacher and 41% were in the area of Perceptually Handicapped Instructor.
- (2) Geographic distribution of applicants for approval was Eastern Mass. - 72.35, Central Mass. - 13.01 and Western Mass. - 7.18. Only 7.5% of all personnel seeking approval were from out-of-state and of these, 5% were in the area of Moderate Special Needs. In all but one area of specialization, the great majority of applicants was currently located in Massachusetts. In the area of Severe Special Needs, approximately half of approvals were issued to personnel from out-of-state.
- (3) More than half of all persons seeking approval (53.6%) were already employed in the public schools; 18.6% were unemployed and 12.3% were employed in a position other than public or private education. Full-

TABLE 7

Summary - No. of Special Education Personnel Approved/Certified in Massachusetts	CERTIFIED						APPROVED					NEW FORMS
	69 - 70	70 - 71	71 - 72	72 - 73	73 - 74	74 - 75	69 - 73	7-1-73 1-31-74	2-1-74 6-15-74	6-16-74 6-30-75	7-1-75 11-19-75 OLD FORMS	
FIELDS												
TEACHERS												
Sensory-Audition (Deaf & Hearing Impaired)	19	9	24	26	4	NA	NA	DU	3	13	3	24
Sensory-Vision (Visually Handicapped)	NA No SPED Certification in this category						DU	DU	16	25	11	31
Severe Behavioral Disorders (Emotionally Disturbed)	NA No SPED Certification in this category						DU	DU	32	232	68	1960
Severe Developmental Disabilities (Mentally Retarded) Special Class	206	220	377	425	76	NA	NA	DU	43	538	184	
Generic	NA No SPED Approval in this category prior to 1-75									0	0	50
Severe Special Needs	NA No SPED Approval in this category prior to 1-75									0	0	44
INSTRUCTORS												
Perceptually Handicapped	NA No SPED Certification in this category								490	2819	335	1579
Speech & Hearing	81	141	129	150	236	296	NA					
School Psychologist	15	24	145	101	146	338	NA					
Administrator of Special Education	NA No SPED Approval in this category prior to 1-75									0	0	156

* Compiled by Bureau of Teacher Certification & Placement

** Approval data compiled by:

-NESEIMC from approval forms in Division of Special Ed. (2-1-74—6-15-74)

-Secretary's Committee on Special Education Manpower (6-16-74—6-30-75)

-Special Education Manpower Project (7-1-75—)

NOTE: NA-not applicable
DU-data unavailable

time students constituted a relatively small proportion (7.2%) of personnel seeking approval.

- (4) Nearly a third of all personnel seeking approval (32.5%) were willing to relocate to obtain employment. Most of these personnel were approved in the areas of Moderate (18.73%) and Perceptually Handicapped (11.76%).
- (5) More than one-half of all approvals (54%) were issued to persons already holding appropriate certification for their current positions; nearly 3% were on waivers, and 12.2% were not appropriately certified.
- (6) Approximately four-fifths of all approved personnel (81.6%) had earned their highest degree from a public or private institution in Massachusetts while 17.1% had completed their degrees outside of the state. The highest degree earned by 57.9% of all approved personnel was a Bachelor's Degree. Only 36.37% of applicants had earned their highest degree in special education.
- (7) Nearly half of all approvals (48.16%) were issued to special education teachers. Classroom teachers constituted 25.8% of all approved personnel (four-fifths of these approvals were for Instructor of Perceptually Handicapped).
- (8) Of the 53.6% of approved personnel currently employed in public schools, almost one-half (24.7%) were not currently involved in any educational training program (college/university or local in-service).
- (9) Nearly three-fourths (71.6%) of all approved personnel were under the age of 35 years and 85% were females (44% single females and 41% married females).
- (10) Approximately two-thirds of all approvals (65.66%) were issued to elementary level personnel while 14.86% were issued to secondary level personnel. Nearly one-fifth of all approvals (18.6%) were issued to unemployed persons. Level of specialization of unemployed persons was pre-school - 0.44%, elementary - 13.68%, secondary - 1.64%, higher education - 0.03% and other - 2.81%.

5 - Applicants for Special Education positions in Public Schools -
Classifications and Geographic Sources (Flow Data) - CAPTA Sample

Data on geographic source of applicants for special education positions is generally not available. But a small sample of the type of flow data has been provided by the CAPTA Collaborative, a computer-based placement system serving 16 Southeastern Massachusetts school systems (13 SE region, 3 Greater Boston region). The total number of applicants for any type of position from January 1, 1976 was 1800 (962 elementary, 838 secondary). Table 3 indicates area of specialization and numbers of applicants certified and/or experienced in one or more special education areas. NOTE: Personnel are classified by traditional categories of handicap. Individual applicants may be counted in more than one category. Allowing for maximum possible duplication in counts, at least 24% of all elementary level and 7% of all secondary level applicants were certifiable and/or experienced in one or more special education areas. The actual percentage is almost certainly larger. In most areas of specialization, the majority of applicants were situated in the South east region. In the areas of Emotionally Disturbed, Language Disabled, Mentally Retarded (Elementary Level), roughly one sixth of applicants were from out of state.

TABLE 3

CLASSIFICATION OF CAPTA APPLICANTS - Jan. 1 - July 15, 1976 *

Area of Specialization	Elementary Level				Secondary Level			
	No. Certifiable Only	No. Experienced Only	No. Both Cert. & Exper.	Total	No. Certifiable Only	No. Experienced Only	No. Both Cert. & Exper.	Total
Sch. Psych.	11	1	2	14	13	1	4	18
Sp. Improve.	8	13	5	26	2	1	2	5
Sp. Therapist	5	3	6	14	1		2	3
Emot. Dist.	71	63	45	179	14	9	17	40
M.R. - Educ.	88	53	46	187	13	12	15	40
M.R. - Trn.	65	39	30	134	9	5	10	24
Lang. Dis.	74	32	45	151	13	6	14	33
Deaf	5	16	3	24		3		3
Phys. Handic.	23	32	9	64	3	10	4	17
Vis. Handic.	15	17	11	43	1	5	1	7
Adj. Couns.	13	6	14	33				
Guidance Couns.	19	8	20	47	26	5	22	53
Guidance Dir.					8	1	3	12

* Source: CAPTA Collaborative

Total School enrollments of participating systems in 1975-76 were 4.6% of the state total. Data submitted in the October 1, 1975 School System Summary Report indicated the following estimates of attritions and new positions to be added in 8 of the 16 CAPTA school systems. (See Table 9).

TABLE 9

Type of position:	Current Vacancies	Anticipated Vacancies	New Positions Needed
Generic	1		2
Moderate		1	1
Perceptually Handicapped			4
Speech/Language	2	1	2
Psychologist		1	2
Paraprofessional		3	6

6 -- Future Program Development Plans of Massachusetts Colleges/Universities:

Plans for modification of existing training programs and development of new training programs must be considered in developing longer range comprehensive manpower plans. Results of the 1975-76 Special Education Training Program Survey indicated that 13 out of 31 institutions planned to modify existing programs, 15 planned to expand existing programs and 18 planned to develop new programs. NOTE: Some of these tentative plans have been changed. This information will be updated in Fall, 1976.

C - DEMAND FOR SPECIAL EDUCATION RELATED PERSONNEL

Demand for personnel is based on three elements:

- 1 - addition of new positions (+)
- 2 - replacement of attritions (+)
- 3 - reductions in force (-)

According to informal estimates by a number of special education administrators, the majority of new positions for 766 implementation were added prior to 1975-76. Most attritions are due to retirement, moving out of a geographic area, promotion, or leaving the labor force. Because of the tightening job market, transfers from one system to another have decreased. Reductions in force due to declining enrollments are comparatively few in number but they are beginning to occur in special education as well as regular education.

Estimates of demand for personnel may be derived from several types of data. These include public school enrollment data and special needs incidence estimates, percentages of children with special needs served in different prototypes, estimated numbers of attritions and new positions in the public schools, types of positions difficult to fill, follow-up data on training program graduates, and estimates of personnel supply/demand balance in other states.

Personnel needs in private schools, educational collaboratives, and other public and private agencies should be combined with needs in public schools to generate a total picture of special education personnel needs in Massachusetts. Unfortunately, available numerical data is limited to the public school sector. Since most teaching personnel are employed in this sector, surveys of anticipated numbers of attritions and new positions, as well as types of positions difficult to fill, provide a good indication of demands for various types of special education related personnel within the state.

1 - Current and Projected Public School Enrollments - Alternative Special Needs Incidence Estimates

Total public school enrollments will continue to decrease through 1978-79. The decrease will be confined to elementary grades until 1977-78, when it will begin to affect grades 7-8. Enrollments in grades 9-12 are expected to increase through 1978-79. Actual total enrollment in 1975-76 was slightly below original estimates: 1,188,157 (preK-Grade 14) compared to 1,199,810 (K - Grade 14). Table 10 compares alternative estimates of special needs incidence for the years 1974-75 to 1978-79.

TABLE 10

	1974-75	1975-76	1976-77	1977-78	1978-79
Total public school enrollment K-12*	1,201,453	1,188,157	1,179,290	(Projections) 1,164,690	1,138,980
Number of children receiving special education services	(Estimates) 97,905	119,665			
Maximum number of children who may be counted for Federal funding (P.L. 94-142)**	144,174	142,579	141,515	139,763	136,678
15% of total enrollment***	180,218	178,224	176,894	174,704	170,847

* Note that figures for pre-kindergarten and post Grade 12 are not included in total enrollment figures. (For 1975-76, total enrollments are 821 in pre-kindergarten programs and 3,957 in Grades 13 and 14).

** 12% of total state enrollment of children aged 5-17

*** Estimate based on approximation of special needs incidence figures from studies in Colorado (1973) and Idaho (1973-74) - 15.6% and 15.21% respectively.

2 - Percentages of Children with Special Needs Served in Different Prototypes

Assignment of a child to a particular prototype provides general information about sites of service delivery but little information about the child's needs. But prototype enrollments do suggest relative prevalence of various service delivery models, which in turn have implications for roles of special education personnel. For example, Prototype 502.1 is by definition a "consultation" model. Prototype 502.2 presumably includes the majority of children served in tutorial programs, resource rooms, and speech therapy programs. Special classes are included in Prototype 502.3 and 502.4.

The percentages in Table 11 were calculated from October 1, 1974 and October 1, 1975 public school report data compiled by the Division of Research, Planning and Evaluation, Massachusetts Department of Education. The October pupil census is substantially lower than the total number of pupils who have received special education services by the end of each academic year. These reports do not include data on Prototype 502.8, Parent-child instruction.

TABLE 11

PERCENT OF PUBLIC SCHOOL SPECIAL EDUCATION PUPILS IN EACH PROTOTYPE AS OF OCTOBER 1, 1974 - AND OCTOBER 1, 1975 *

Prototype No.	Prototype Description	% of Pupils in Each Prototype			
		Oct. 1, 1974		Oct. 1, 1975	
		No.	%	No.	%
502.1	Regular Day Modified	28449	35.85	19743	19.75
502.2	Up to 25% Separate	34844	43.9	56140	56.15
502.3	25% to 60% Separate	6259	7.89	9112	9.11
502.4	Over 60% Separate	7060	8.9	9124	9.13
502.5	Special Day School	1097	1.38	3129	3.13
502.6	Special Resident School	221	0.28	1806	1.81
502.7 Type A	Short-Term home or hospital	290	0.365	332	0.33
502.7 Type B	Long-Term home or hospital	151	0.19	133	0.13
502.9	Diagnostic Program	993	1.25	457	0.46
TOTAL		79364	99.995	99976	100

* Institutional Schools pupils are not included in these totals

3. - Demand for Special Education Related Personnel in Public Schools

Two surveys of special education personnel needs in Massachusetts public schools have been conducted by the Manpower Project during the 1975-76 school year. Results of both studies are subject to some limitations, but provide useful estimates of levels of demand in various areas of specialization.

In both studies, respondents were asked to estimate numbers of attritions which would take place by the end of the current year and numbers of new positions which would be needed for the coming year. Most of these estimates were made during the first four months of the school year prior to approval of school budgets. In addition, respondents were asked to indicate types of positions difficult to fill.

a) Council of Administrators of Special Education, Mass. Council for Exceptional Children (CASE-CEC) Voluntary Survey

Respondents to this survey provided data on numbers of current staff, number of attritions anticipated, and both ideal and real needs for personnel. Ideal needs (no. of new positions needed) were approximately twice as great as real needs (no. of positions likely to be available.) Full-time and part-time positions were differentiated. Although the sample was somewhat skewed in terms of regional representation and size of school systems, neither of these variables appeared to be correlated with level or type of demand. The 60 systems included in the sample accounted for 18.4% of the total state pupil enrollment in 1975-76. Statewide projections were based on the ratio of total pupil enrollments in sample systems to statewide pupil enrollment (See Table 12).

b) School System Summary Report - Special Education Staff Needs - Voluntary Form

Respondents to this survey provided data on numbers of current and anticipated vacancies, and numbers of new positions needed. There may have been some confusion with regard to reporting needs as ideal or real. Part-time and full-time staff were not differentiated. The form was completed by 165 school systems, which served 59% of total state pupil enrollment in 1975-76. 211 school systems left the form blank or drew a line through it. There is no way to differentiate those systems which anticipated no needs for new personnel from those which chose not to specify needs. For this reason, two projections were made from the data: (1) a minimum projection derived by combining actual totals reported for current and anticipated vacancies and anticipated new positions; (2) a maximum projection calculated on the basis of ratio of total enrollments in reporting systems to total statewide enrollments. It should be noted that a few systems reported possible reductions in force of special education personnel. (See Table 12).

SPECIAL EDUCATION MANPOWER NEEDS IN MASSACHUSETTS PUBLIC SCHOOLS FOR THE 1976-77

SCHOOL YEAR

		CEC- CASE Survey - Special Education Manpower Needs						School System Summary Report - Special Education Manpower Needs				
		No. of Anticipated Vacancies		No. of New Positions (real)		Statewide Needs Projections		No. of Vacancies		No. New Positions Needed 1977-78	Statewide Needs Projections	
		FT	PT	FT	PT	FT	PT	Current	Anticipated		Minimum	Maximum
SPEED ADMINISTRATOR				2		11		2	6	7	15	25
TEACHERS	GENERIC	9		11	1	109	5	7	31	54	92	156
	MODERATE	14	1	20	1	185	11	7	25	77	109	185
	VISION		3				16		6	2	8	13
	AUDITION	2		3		27		1	3	8	12	20
	SEVERE			1	1	5	5	4	10	25	39	66
PERCEPTUALLY HANDI. INSTRUCTOR		4	3	13	2	92	27	3	34	79	116	197
PHYSICAL THERAPIST			1				5	1	5	6	12	20
OCCUPATIONAL THERAPIST				1		5		3	1	6	10	17
SCH. SOCIAL WORKER		1		5	2	33	11	2	6	21	29	49
PARAPROFESSIONAL		16		22	5	206	27	11	19	107	137	232
BILINGUAL TEACHER				6		33		4	9	20	33	56
SPEECH/LANGUAGE SPEC.		3		14	1	92	5	9	22	42	73	124
SCH. PSYCHOLOGIST		1		4	4	27	22	12	13	31	56	95

Data was collected by CASE-CEC and compiled by the Manpower Project.

Data from the School System Summary Report Manpower Needs form was compiled by the Division of Research, Planning and Evaluation of the Massachusetts Department of Education. Projections were prepared by the Manpower Project

4 - Demand for Special Education Related Personnel in Institutional Schools and Collaboratives

Actual demands for additional Institutional School Staff cannot be estimated with any degree of accuracy. Although substantial needs for personnel exist, approval of new positions depends on the state budgetary process.

The Manpower Project was unsuccessful in collecting special education personnel needs data from most educational Collaboratives. Judging from the data provided by 12 respondents to a voluntary survey, both staffing patterns and personnel needs vary widely from one Collaborative to another. One other data source provides Collaborative staff needs. All Bureau of Institutional School contracts, which support movement of children out of state institutions, are awarded to Collaboratives. One recently awarded group of 18 contracts (between 9 Institutions and 15 Collaboratives) included requirements for 110 professional staff and 146 paraprofessional staff. Some Collaborative Directors have indicated particular difficulty in locating Occupational Therapists, Physical Therapists and Speech Therapists trained to work with children of limited verbal ability.

The greatest needs for Severe Special Needs Teachers are undoubtedly in Collaboratives and Institutional Schools but future needs cannot yet be estimated.

5 - Follow-up Data on Training Program Graduates

Follow-up data on training program graduates is useful in estimating both qualitative and quantitative aspects of demand for new personnel. The quantitative aspect is easier to assess but the qualitative aspect is probably more important for long-range program planning. Roles and responsibilities of program graduates, geographic location of employment and type of employing agency have significant implications for continuing redesign of preparation programs to meet emerging needs.

Unfortunately, this type of data is not available from many training programs at present. Training program representatives have indicated intent to collaborate with the Manpower Project to improve collection of follow-up data during the coming year.

6 - Demand for Special Education Related Personnel in Other States

Since some graduates of Massachusetts training programs seek positions out-of-state, personnel needs in other states affect the supply/demand balance in Massachusetts. Although other states are currently involved in cooperative planning efforts, specific data based on manpower needs studies is not yet available from many states.

Informal information from state education agency staff in the three most sparsely populated New England states indicates a more than ample supply of special education teachers in traditional categories of preparation and limited needs in some relatively new areas such as Severe Special Needs. Both Maine and New Hampshire have experienced an increasing influx of out-of-state personnel seeking jobs in special education. New Hampshire has discontinued emergency waiver provisions because of the adequacy of supply of trained personnel.

During the coming year, the Manpower Project will attempt to collect more definitive data on special education personnel needs in other states. The recently funded National Special Education Manpower Project should be able to assist in this effort.

7 - Demands for Bilingual Special Education Personnel and Secondary Level Special Education Personnel

These areas deserve special emphasis for two reasons. Both bilingual special education and secondary level special education have emerged relatively recently as areas of personnel need. In addition, needs in each of these areas span several more specialized areas of preparation, eg., teachers, aides, psychologists, speech therapists.

a - Secondary Level Special Education

Until recently, the major focus of special education service delivery has been at the elementary school level. Most special education personnel have been prepared to work with children at this level. The Chapter 766 mandate to provide special education services for all eligible children has stimulated growth of needed secondary level programs. As of October 1, 1974, approximately 24% of children receiving special education services were in grades 7-14. By October 1, 1975 this percentage had increased to approximately 28%.

Although the Manpower Project did not formally survey needs for secondary level personnel, many administrators have reported difficulty in developing programs and locating personnel prepared to work at Junior and Senior High School levels.

Anticipated changes in the pattern of total school enrollments should also increase the demand for secondary level personnel. School enrollment projections indicate that Junior High enrollments should peak in the 1976-77 school year and then begin to decline, but that Senior High enrollments will increase by more than 12,000 students between 1975-76 and 1978-79. (During the same period, elementary school enrollments are expected to decrease by more than 52,000 students).

b - Bilingual Special Education

The area of bilingual special education poses some of the most difficult logistic problems both in terms of service delivery and personnel preparation.

In the past, there has been a tendency to place bilingual children with special needs either in bilingual programs or in special education programs, without providing for both aspects of needs. The incidence of special needs among bilingual children is presumably as great as in the rest of the population. In the past, substantial numbers of bilingual children have been misclassified and misplaced in special education classes due to limited English speaking ability, as documented by court cases in a number of states. Clearly, personnel should be both bilingual and trained in special education in order to provide more appropriate services for bilingual children with special needs, and to avoid erroneous classification of children.

Both manpower needs surveys identified needs for additional bilingual special education personnel and difficulty in filling available positions. Data reported in the October 1, 1975 School System Report indicates that 37,741 bilingual children are currently enrolled in Massachusetts public schools. Of these children, 14,988 are of limited English speaking ability.

TABLE 13

PUBLIC SCHOOL ENROLLMENTS - BILINGUAL STUDENTS
1975 - 76

Primary Language	EDUCATIONAL REGION						TOTAL
	Gr. Boston	N.E.	Pitts.	S.E.	Scrflld.	Worc.	
Chinese:							
All bilingual	1441	54	6	49	32	26	1608
Limited English Speaking	422	7		10	8	8	455
French:							
All bilingual	814	258	4	72	85	113	1346
Limited English Speaking	424	62		5	4	2	497
Greek:							
All bilingual	972	415	8	134	60	305	1894
Limited English Speaking	341	149	3	17	8	188	706
Italian:							
All bilingual	2309	286	15	67	125	149	2951
Limited English Speaking	820	118	3	5	37	45	1028
Portuguese:							
All bilingual	1566	566	13	6451	582	526	9704
Limited English Speaking	715	305	3	2064	219	233	3539
Spanish:							
All bilingual	6491	3164	28	756	4799	2064	17302
Limited English Speaking	3313	1594	3	271	1627	1134	7942
Others:							
All bilingual	1113	499	47	856	146	275	2936
Limited English Speaking	487	134	18	72	63	115	899

NOTE: Limited English speaking children are included in totals for all bilingual children.

Two types of logistic problems must be considered in planning for preparation and utilization of bilingual special education personnel. One is the number of languages involved. The percent of children in each primary language group is: Chinese-4.3%; French-3.6%; Greek-5%; Italian-7.3%; Portuguese-25.7%; Spanish-45.8%; Other (and there are several) - 7.8%. The other problem is related to geographic distribution of children. A number of children with the same linguistic background may reside in the same community. But in many instances, only 1 or 2 bilingual children live in a community. Delivery of special education services to one child of limited English speaking ability in a small rural community clearly requires careful planning - with implications both for preparation and utilization of special education personnel.

Table 13 provides further information on distribution of bilingual children in Massachusetts. If the incidence of special needs is as great for these children as it is in the rest of the population, (12% estimate) the number of children with special needs in each primary language group would be at least: Chinese-193; French-162; Greek-227; Italian-354; Portuguese-1164; Spanish-2076; Other languages-352.

8 - Personnel Placement Problems:

The demand picture can be distorted by personnel placement problems, i.e., difficulty matching available personnel with available positions. A Placement Task Force of the Manpower Project identified several major problems associated with existing placement systems and recommended some possible alternative strategies.

Project staff compiled data on numbers of available special education positions reported, over the last two years, to the Massachusetts Division of Employment Security and the Massachusetts Department of Education's Bureau of Teacher Certification and Placement. In each case, the number of positions reported was far below the actual number of positions available. Interviews with special education administrators revealed the following reasons for not reporting positions:

- a - In areas of oversupply, the number of applicants often far exceeds the number of available positions, even if positions are not reported to a placement agency (e.g., nearly 400 applicants for 2 Moderate Special Needs teaching positions.)
- b - Personnel in areas of shortage frequently do not seek assistance from a placement agency (e.g., bilingual special education).
- c - Inequalities in geographic distribution of applicants may create a spurious picture of surplus or deficit, e.g., one system may have 2 or 3 qualified applicants for a particular type of position while another town in the same region may have no applicants for the same type of position.

A survey of 53 Special Education Administrators in public schools and collaboratives indicated that respondents felt that hiring of new personnel placed undue demands on their time due to: the need to process large numbers of applicants for small number of positions (24) and difficulty in locating qualified applicants for some positions (20). Priority levels for development of a more functional placement system were varied: high - 21, medium - 16 and low - 15 respondents. Preferred sites for such a system were the Department of Education, Bureau of Teacher Certification and Placement (30) and Educational Collaboratives (15). Such a system would be used by respondents to minimize time spent in processing large numbers of applications (30) and to locate personnel for positions difficult to fill (38). Only 5 would probably not use it.

9 - In-Service Training Needs

Another type of elasticity should also be kept in mind in assessing personnel needs. Training needs may be described at three levels: (a) needs for pre-service training of new personnel, (b) needs for short-term in-service training (workshops and assorted courses) and (c) needs for long-term continuing education to prepare currently employed personnel for new roles (a hybrid of pre-service and in-service training). To the extent that comprehensive and integrated field-based preparation programs are made available for in-service personnel, needs for new personnel will correspondingly decrease. Changes in pre-service preparation programs, e.g., provision of special education training for regular education personnel, will also modify future needs for in-service training.

Some of the greatest training needs exist at the in-service level. Special education training is needed by both regular educators and special educators. Chapter 766 has placed many new demands on regular education teachers and administrators. Many special education personnel also need opportunities to increase skills, through short-term workshops or courses, or to prepare for new roles, through long-term (often 2 yr.) field-based training programs.

The needs for in-service training to support implementation of Chapter 766 have been almost universally recognized for some time, in-service training needs are now intensified by the decreased turnover of personnel in regular education and in some areas of special education.

Although specific data on attrition rates is not yet available, informal information from a number of special education administrators indicates a decreased turnover of personnel. This is a logical consequence of the declining job market in some areas of specialization. As a result of declining enrollments and reductions in force, many regular education personnel are now tenured and likely to remain in their present positions for some time.

Nearly all College/University special education training programs have been attempting to respond to these needs - in a variety of ways. In addition to providing in-service workshops and courses, a number of institutions have developed field-based retraining programs. A few programs are almost entirely field-based.

D - OVERVIEW OF SUPPLY/DEMAND BALANCE

Several years ago, the gap between the numbers of special education personnel needed and those available seemed hopelessly broad. But the situation has changed fairly rapidly within the last two to three years. A recent U.S. Department of Labor (DOL) publication notes that "The field of special education, once a bright spot for teaching graduates, has been over saturated and openings are now rare." (Employment Outlook for 1976 College Graduates in New England, New England Regional Office, DOL, 1976 - p.11). Data collected by the Massachusetts Manpower Project indicate that this statement is somewhat exaggerated. The SPED Personnel Needs form in the October 1, 1975 School System Summary Report was completed by school systems serving 59% of the total statewide pupil enrollment. Respondents reported 83 current vacancies, and estimated 272 anticipated vacancies (attritions) and 657 new positions needed. Prorated to 100% on the basis of pupil enrollment, these totals would be 141 current vacancies, 461 anticipated attritions and 1114 new positions needed. The DOL statement is based on information supplied by College/University Placement Directors and reflects increasing difficulty in placing graduates due to the ample supply of personnel in some areas of specialization. Limited to substantial needs for new personnel still exist in other areas. The supply/demand balance must be assessed separately for each area of specialization.

Another type of elasticity should also be kept in mind in assessing personnel needs. Training needs may be described at three levels: (a) needs for pre-service training of new personnel, (b) needs for short-term in-service training (workshops and assorted courses) and (c) needs for long-term continuing education to prepare currently employed personnel for new roles (a hybrid of pre-service and in-service training). To the extent that comprehensive and integrated field-based preparation programs are made available for in-service personnel, needs for new personnel will correspondingly decrease. Changes in pre-service preparation programs eg., provision of special education training for regular education personnel, will also modify future needs for in-service training.

Information collected during the Manpower Project's first year does not provide exact quantitative data on the supply/demand balance in most areas of specialization. In terms of reliability, data ranges from total exact counts (eg., numbers of personnel receiving SPED Approval) to samples and estimates (eg., estimates of future SPED personnel needs reported by a sample of school systems). Table 14 summarizes data on supply/demand of special education related personnel reported by Massachusetts Colleges/Universities and Public Schools.

TABLE 14

SPECIAL EDUCATION PERSONNEL SUPPLY AND DEMAND

1975 - 1976

Area of Specialization	No. of Students Enrolled in Degree Programs 1975 -76			No. of Graduates Anticipated by June 1976.			No. of Approvals & Certificates Issued	Projected Public Schools Needs 1976 - 1977				% Of Reporting Systems Reporting Positions Difficult to Fill 1975 - 1976		
	Bach	Mast	CAGS Doct.	Bach	Mast	CAGS Doct.		CEC-CASE Sample		School System Summary Report		CEC-CASE		School Sys Sum. Repor
								FT	PT	Minimum	Maximum	FT	PT	
SPED Administrator		5	9+		?	?	156	11		15	25		1.66	1.21
Generic Teacher		225+	9?		66+	?	50	109	5	92	156	6.66	1.66	3.66
Moderate Teacher	2708+	1300+	21	626+	244+	2+	2212			109	185			1.82
Severe Develop. Disabilities (MR)					30 to 40			125						
Severe Behav. Disabilities (ED)								60	11			3.33	1.66	
Severe Special Needs Teacher	94+	110+	1+	22+	46+		44	5	5	39	66			2.43
Vision Teacher		25			16		42		16	8	13		1.66	2.43
Audition Teacher*		25+			25+		27	27		12	20			.60
Instructor - Percept. Handicapped							1914	92	27	116	197	3.33	5.0	
Speech & Hearing/* Lang. Specialist	759+	184+	22+	81+	20+	?	No. of Certifi- cates - not yet available	92	5	69	101	1.66	1.66	.60
Sch. Psychologist *		108+	22		27+	?		27	22	56	90	1.66	1.66	6.09

* Data Incomplete

Despite some limitations, combined data from various sources is sufficient to provide general estimates of the current balance of personnel supply/demand in most areas of specialization.

1 - Teacher - Generic

This relatively new role is still evolving in Massachusetts public schools and training programs. Generic training models developed in other states include Diagnostic-Prescriptive and Consulting Teachers, Curriculum Consultants and a number of others. In theory, the Generic Teacher is knowledgeable and skilled in (a) regular classroom curricula, programs and management, (b) special education strategies including assessment, development and implementation of individualized educational plans and evaluation of pupil progress in achieving educational objectives, and (c) consultation and in-service training. The Generic teacher is responsible for education of children with mild-moderate special needs. Primary emphasis is on provision of consultation, support and in-service training for regular education personnel. In practice, the role includes varying amounts of direct services to children and is not clearly defined or understood by some public school personnel.

Although more than 500 Generic teachers are reported to be currently employed in public schools, only 50 such teachers have been approved in this area of specialization. This may reflect changes in roles of currently employed personnel, i.e., more emphasis on consultation. Several school systems (6 out of 164) reported this position difficult to fill. Anticipated attrition rates were higher in this area than in most others.

Most College/University training programs require two or more years of regular teaching experience prior to entry into the program. Most Generic programs are partially or entirely field-based, i.e., students are trained while concurrently employed in public schools. More than half of 66 June graduates are already employed. Several institutions of higher education are currently developing Generic programs.

2 - Teacher - Moderate Special Needs

This area has been in oversupply in Massachusetts for two years and exhibits the most extreme supply/demand imbalance of any area of specialization. As previously noted, the majority of personnel approved in this area have been "grandfathered in" on the basis of training in a single traditional categorical area (Mental Retardation). This particular category is also in oversupply in a number of other states. Of the 287 persons from out-of-state who obtained Massachusetts Special Education Approval last year, 195 (68%) were in the area of Moderate Special Needs. Some respondents to the CEC-CASE personnel needs survey (which collected data in terms of traditional categories as well as new personnel classifications) indicated difficulty locating personnel to serve children with emotional/behavioral needs.

Enrollment cutbacks and program reorganizations in a number of Mass. training programs should help to decrease the supply/demand discrepancy in future years - in terms of both quantity and quality.

3 - Teacher - Severe Special Needs

This area of specialization is also relatively new and the role definition is still evolving. In addition, the quality of personnel needs varies considerably from one setting to another.

The Bureau of Institutional Schools reports approximately 10 applicants for every teaching position. Some of these personnel are not qualified. A number of unsolicited applications are received from out-of-state. Some private schools have reported difficulty in locating qualified personnel to teach children with severe behavioral/emotional needs. The greatest needs for new Severe Special Needs Teachers are in Collaboratives, but data is not available on the number of new personnel needed or on the number currently employed. Since Special Education Approval is not required for personnel in Institutional Schools, Private Schools and most Collaboratives, the job market is particularly elastic for such personnel.

Few training programs are currently well-developed in this area. One existing program is part of a national network preparing personnel to work with Deaf/Blind Multihandicapped children but most graduates are expected to leave the state. Several Colleges/Universities are planning to develop programs. It will be important to assess the supply/demand balance as new programs develop.

4 - Teacher - Vision

Although the State Coordinator for Visually Handicapped has indicated that the supply of qualified personnel from out-of-state has been more than adequate to meet existing needs in recent years, four systems reported difficulty filling positions during the last year. The single training program in Massachusetts graduated 16 students this year. This area is probably close to a reasonable supply/demand balance, assuming maintenance of the current level of supply.

5 - Teacher - Audition

Limited needs for new personnel exist in this area. Respondents to personnel needs surveys anticipated several new positions but only one system reported difficulty in filling a position. Data is not available on graduates from one program. All 25 graduates of the other program were placed prior to graduation, some out-of-state. This area also is probably close to a reasonable supply/demand balance, assuming continuation of the current level of supply.

6 - Instructor - Perceptually Handicapped

No new approvals will be issued in this area after September 1, 1976. The minimal requirements for approval (1 or 2 courses) have been at or below a paraprofessional level. The Department of Education does not certify or approve paraprofessionals in other areas of specialization. Persons who have completed a full preparation program in this area have been able to obtain approval as Moderate Special Needs Teachers. Individuals who have obtained approval as Instructors may continue to function as tutors of individual children or small groups of children. The 1974 approvals issued in this area during the last year constituted 41% of all Approvals issued. Half of these approvals were issued to persons employed as regular classroom teachers. No respondents to the larger (School System Report) personnel needs survey and 3 respondents to the smaller (CEC-CASE) survey indicated difficulty filling positions in this area. Of the latter, one specified problems in locating a secondary level staff person. Approximately one-fifth of all personnel approved in this area were unemployed.

7 - Administrator - Special Education

Needs for new personnel in this area appear to be limited. The number of new positions anticipated was small, in both personnel needs surveys. Informal information supplied by various administrators and other persons suggest that the number of actual attritions at the end of 1975-76 was greater than reported estimates but that many of these positions have been filled by personnel already employed within the state. A few school systems and Collaboratives have reported difficulty in locating personnel to meet specific requirements, despite availability of a number of applicants. Substantial in-service training needs also exist in this area. Several Colleges/Universities are developing Special Education Administration training programs. The supply/demand balance should be carefully observed over the next two years.

8 - School Psychologist

A limited undersupply appears to exist in this area of specialization. Estimated needs for additional school psychologists vary somewhat between the two surveys. The CEC-CASE survey (smaller sample) estimates needs for 27 full-time and 22 part-time psychologists. Results of the School System Summary Report survey estimate a larger demand, ranging between 56 and 90 additional personnel. Presumably, 20-25% of these positions might be part-time, based on the CEC-CASE ratio. Ten out of 165 respondents to the School System Report survey indicated difficulty in filling school psychologist positions. (Distribution by educational region: 2 - Southeast; 4 - Greater Boston; 3 - Northeast; 1 - Worcester).

Although we do not have complete data, the number of 1976 graduates is probably less than the number of new positions available. Data on a number of school psychologists certified in 1975-1976 is not yet available.

Flow data is not collected from persons who obtain certificates in school psychology. The small CAPTA sample (See Table 8) provides some information on applicants for new positions. The majority of applicants for both elementary and secondary positions were certifiable but not experienced. Only 4 applicants were from out-of-state.

A decrease in the supply of new personnel may have occurred as a result of recent changes in certification standards, requiring a substantially higher level of training (60 credit hours). Some training programs have been modified and at least one program (Westfield State) has been discontinued. At least two new programs are being developed. It is not yet possible to estimate whether recently developed and modified programs will be sufficient to respond both to current unmet demands and annual attritions. This area will also require careful monitoring.

9 - Speech and Hearing/Language Specialist

This combination of titles reflects the range of roles in which Speech personnel may be expected to function in public, private and institutional schools and Collaboratives. Informal information provided by program administrators indicates that some systems wish to hire traditionally trained speech therapists to work primarily with individual children, while others are seeking personnel who are also knowledgeable in language development and prepared to function in part as consultants to other staff. In addition, a limited need exists for personnel competent to work with children of limited verbal ability, including those who need to develop skills in non-verbal communication.

Many speech specialists have been seeking to raise certification standards in this area. Currently, completion of an undergraduate program is sufficient for certification in the area of Speech and Hearing Handicapped. Under current fiscal constraints, many school systems prefer to hire less expensive graduates of Bachelor's level programs rather than personnel with Master's level training. Low certification requirements substantially increase the supply of available personnel.

Estimated statewide needs for speech specialists are: 92 full-time and 5 part-time personnel (CEC-CASE survey) and 69-101 personnel (School System Summary Report Survey). This data does not include needs in Collaboratives and Institutional Schools. Some collaboratives have experienced difficulty in locating speech personnel trained to work with children with low verbal ability. It should be noted that Title XIX requirements, which apply to Bureau of Institutional School contracts with Collaboratives, specify that Speech specialists must hold a Master's degree.

Unfortunately, our data on supply of new personnel is incomplete. But the size of enrollments (undergraduate - 759+ and graduate - 213+) and the numbers of graduates anticipated (undergraduate - 81+ and graduate - 20+) suggest a more than ample supply of personnel. The

availability of adequate numbers of speech/language personnel for public schools is also supported by the small number of systems reporting positions difficult to fill in this area: one each full-time and part-time out of 60 systems (CEC-CASE) and 1 out of 165 systems (School System Summary Report).

Flow data is not available for personnel who obtain certification in this area of specialization. Data from the small CAPTA sample is of interest in two respects. (see Tables 8 & 9) In contrast to applicants in other special education areas, approximately half of all speech therapists were both certifiable and experienced (elementary - 6 out of 14; secondary 2 out of 3). School System Report Data from 8 of the 16 CAPTA systems indicated needs for 5 speech/language specialists.

Although this area is probably reasonably balanced or moving into oversupply in terms of quantity of personnel available for most public school positions, some qualitative discrepancies appear to exist.

10 - Early Childhood Special Education Personnel

The supply/demand balance in this area is somewhat difficult to assess because many young children with special needs are enrolled in programs operated by non-public education agencies. Most public school and Collaborative programs for preschool (3-4 year old) children with special needs are substantially separate. Department of Mental Health programs, now phasing into public school and Collaborative jurisdiction, are also substantially separate. If children require an integrated program, they may be placed in a private nursery school, a day care program, a Headstart program, or a Department of Public Health program.

The two public school personnel needs surveys indicate limited needs in this area. Statewide needs estimates are: 16 full-time and 5 part-time personnel (CEC-CASE) and 34-58 personnel (School System Summary Report). One system (1.66%) in the CEC-CASE Survey and 3 systems (1.8%) in the School System Report Survey reported difficulty filling this position. Project staff conducted an informal survey of staff members in various agencies who are frequently contacted by individuals seeking positions, and programs seeking personnel. Results indicate that the number of available early childhood/special education teachers is substantially larger than the number of available positions. This view is supported by increasing difficulty in placing graduates reported by some training programs. Some individuals reported difficulty in locating qualified administrators. The greatest needs in Headstart and Day Care programs are for in-service special education training of existing staff.

Due to the lack of specific requirements for approval of Early Childhood/Special Education teachers, individuals from a variety of backgrounds may be employed in public school preschool programs, if they hold an elementary education certificate. As a result of declining enrollments and concomitant reductions in force, some elementary education personnel are being transferred into early childhood positions.

Data on supply of early childhood ed. (ECE) and early childhood/special education (ECE/SPED) teachers was collected from 24 Massachusetts Colleges/Universities which offer degree programs in early childhood education, early childhood/special education or some combination of the two. Table 15 summarizes data on numbers of students enrolled in various types of programs and anticipated graduates. Detailed information is available in a separate report.

TABLE 15

ENROLLMENTS AND GRADUATES — MASS. ECE AND ECE/SPED DEGREE PROGRAMS
1975 - 76

Type of Program	No. of Students Enrolled 1975 -76				No. Graduates Expected 1976			
	B	M	C	D	B	M	C	D
ECE - Regular Ed.	1351- 81	71	5	24	502- 12	12		1
ECE - Regular Ed with SPED Component	346- 48	53- 55			132	32- 35		
ECE-SPED		51				18		
SPED with ECE Component	465	137- 8	2		100	56- 58	2	

B-Bachelors, M- Masters, C-CAGS, D-Doctorate

A moderate oversupply of ECE/SPED pre-school teachers appears to exist. This statement does not apply to administrators or to personnel trained to work with children from infancy to 3 years of age. No attempt was made to assess need for such personnel. In-service training needs were stressed by personnel in all types of agencies surveyed. Such training is needed not only by teachers, administrators, and aides, but also by support personnel such as speech/language specialists and psychologists.

Expansion of public school/Collaborative pre-school programs and anticipated increases in Federal funds for ECE/SPED programs may reduce this supply/demand discrepancy to some extent. In addition, some institutions are diversifying their training programs to prepare personnel to work with very young children and their parents, and to work in settings other than schools.

11 - Bilingual Special Education Personnel

Although personnel needs in this area are somewhat limited in terms of quantity, they are complex in terms of quality. (see page) Total enrollment of Bilingual children in 1975-76 was 37,741 (3.16% of statewide public school enrollments). Assuming a 12-15% incidence of special needs in this group, 4529 - 5661 bilingual children would require special education services. Although the majority of bilingual children speak one of six primary languages, 7.8% speak one of a variety of other primary languages.

In addition, size of enrollments and geographic distribution of bilingual children varies considerably. One or more groups of 20 or more children speaking the same primary language are reported by 61 systems (1 language - 26 systems; 2 languages - 20 systems; 3 languages - 6 systems; 4 languages - 4 systems; 5 languages - 3 systems; 6 languages - 2 systems). In addition 24 systems report enrollments of more than 20 children speaking other languages. At the other extreme, many systems report enrollments of 5 or fewer children in a primary language group (Chinese - 64 systems; French - 48 systems; Greek - 62 systems; Italian - 45 systems; Portuguese - 51 systems; Spanish - 76 systems; Others - 117 systems).

The problems of planning for delivery of appropriate bilingual special services and assessing related personnel needs are further complicated by the variety of personnel needed, i.e., teachers, psychologists, speech therapists and others.

The two special education personnel needs surveys collected quantitative information only on bilingual special education teachers. Projected statewide needs were estimated to be 33 full-time teachers (CEC-CASE) and 33-56 teachers (System Summary Report). Qualitative concerns regarding needs for various types of personnel in different primary language groups have been communicated to Project staff informally by a number of administrators.

Although relatively few systems reported difficulty in filling bilingual special education teaching positions (CEC-CASE - 2; School System Summary Report - 3), some administrators have indicated substantial difficulty in locating teachers and other personnel. Some have developed creative alternatives using local community residents, some have searched for personnel in a number of other states.

No bilingual special education teacher training programs currently exist in Massachusetts, although at least 6 institutions have indicated interest in developing such programs. Program planners will need to explore several alternative program structures to prepare personnel to function in a variety of roles and settings and service delivery models. Some special education training should also be incorporated into preparation programs for teachers in "regular" bilingual and English as a Secondary Language programs.

12 - Other Areas and Levels of Specialization

Although personnel needs exist in the following special education areas, available supply/demand data is too incomplete to assess the current balance. Information which has been collected by the Project is summarized for each area of specialization.

a - Audiologist

Data on personnel supply and demand in this area have not been collected. However, the State Educational Specialist for Speech, Language and Hearing estimates a need for 5-10 additional audiologists during 1976-77.

b - Occupational Therapist and Physical Therapist

In the past, occupational and physical therapists (OT's and PT's) were rarely employed in public schools. Now, demands for such personnel appear to be limited but increasing. The two personnel needs surveys indicate estimated demands for 5 full-time physical therapists and 5 part-time occupational therapists (CEC-CASE), and 12-20 physical therapists and 10-17 occupational therapists (School System Summary Report). Difficulty in filling positions was indicated by 2.4% (OT) and 2.4% (PT) of systems responding to the School System Summary Report Survey and 3.3% (OT) and 5% (PT) of systems responding to the CEC-CASE Survey. Limited demands also exist in Collaboratives and Institutional Schools.

Data on 1976 graduates is incomplete but many of these personnel will seek employment in public and private human services agencies rather than in education agencies. One concern about quality of OT and PT preparation has been expressed by several public school administrators and Collaborative directors. Since OT's and PT's have traditionally been trained to work in clinical settings, their preparation has emphasized direct work with clients. Few have been fully prepared to work in public school settings and to function as consultants to public school staff, e.g., training a teacher to incorporate certain exercises into a child's daily classroom activities.

c - Paraprofessionals

Although some quantitative data is available on demand for paraprofessionals, more qualitative information is needed to analyze supply and demand in this area. Estimated public school needs for special education paraprofessionals were 206 full-time and 27 part-time personnel (CEC-CASE) and 137-232 personnel (School System Summary). Few systems reported difficulty filling paraprofessional positions. Although data on personnel needs in Collaboratives is limited, information on paraprofessional positions included in some new contracts suggests that a variety of paraprofessional roles may be emerging. Some Collaboratives are interested in developing cooperative relationships with Community Colleges to provide field-based training programs for paraprofessionals.

d - Peripatologist

This area was included in only one personnel needs survey (School System Summary Report). Projected needs are for 3-5 additional peripatologists. One system indicated difficulty in filling this position. The single Massachusetts training program expected 24 students to graduate in 1976. Some graduates move out-of-state and others are frequently employed by agencies other than public schools.

e - Physical Education/Recreation Teacher/Therapist

Physical education/recreation programs for children with special needs are often administered by branches of city/town governments other than public schools. In 1974-75, 4,437 children were served in recreation programs for the handicapped. Of these children, 673 were enrolled in 20 public school operated programs and 4437 in 80 municipal programs.

Public school needs for physical education/recreation (Spec. Ed.) personnel were estimated to be 11-19 additional staff. (School System Summary Report) Difficulty filling positions was reported by 2.4% of responding systems. Data is not available on needs in Collaboratives, private and Institutional Schools, public and private human services agencies, and municipal physical education/recreation programs. Training program data is incomplete.

f - Rehabilitation Counselor/Therapist

Many agencies other than public schools also employ rehabilitation personnel. The School System Summary Report survey indicates estimated needs for 1 - 2 rehabilitation therapists and 4-7 rehabilitation counselors. No systems reported difficulty in filling either of these positions. Estimates of needs in other public and private agencies are not available. Training program data is incomplete.

g - School Social Worker and School Nurse

Social Workers and nurses are employed in many non-public school agencies and those employed in public schools may have few responsibilities for special education services. Since many school systems do utilize social workers and nurses, to some extent, in providing special education services, personnel needs in these areas were investigated. The two personnel needs surveys indicate the following estimated needs: school nurses - 6 full-time and 16 part-time (CEC-CASE) and 28-48 (School System Summary Report); social workers - 3 full-time (CEC-CASE) and 29-49 (School System Summary Report). No respondents to either survey indicated difficulty in filling school nurse positions, and 3 respondents to the CEC-CASE survey but no respondents to the larger survey indicated difficulty filling social worker positions. Data was not collected from training programs but other informal information collected by the Project suggests a more than adequate supply of personnel in both areas.

h - Vocational Education/Special Education Teacher

This is an area of emerging needs, both for special education personnel trained in vocational education, and vocational education personnel with some training in special education. Increasing numbers of students with special needs are being enrolled in vocational education programs, but few personnel have been prepared to work in these programs. Data on quantitative and qualitative dimensions of personnel supply and demand in these areas are not yet available.

i - Secondary Level Special Education Personnel

Although needs for secondary level personnel were not formally surveyed, a number of administrators have informally reported difficulty in locating qualified personnel. Several special education training programs have reported training small numbers of secondary level personnel during the last two years. Respondents to the 1975-76 Special Education Training Program Survey indicate that 10 institutions plan to develop secondary level programs.

Two frequently expressed qualitative concerns should be considered in developing programs for special educators whose roles will involve collaboration and consultation with regular education personnel in Grades 7-12. One is the strong content orientation of secondary level teachers and the other is the comparatively large number of teachers who may be involved with a single student.

Although additional secondary level special educators are needed, available data is insufficient to estimate the number of personnel needed in various areas of specialization.

E - STATE AND FEDERAL SPECIAL EDUCATION TRAINING PRIORITIES

1 - Massachusetts Special Education Training Priorities for 1976-77

A Draft of SPED Training Priorities for 1976-77 was developed on the basis of data collected by the Special Education Manpower Project during its first year of operation. The Draft was reviewed and revised by the Massachusetts Division of Special Education Coordinating Committee, the Manpower Project Policy Advisory Board, and the Massachusetts Special Education Training Program Liaison Group.

Massachusetts Special Education Training Priorities, not listed in order of importance, are:

- * (1) Collaboration between institutions of higher education and public schools, collaboratives and/or institutional schools to provide in-service training (coursework and/or degree programs) for currently employed personnel.
- (2) Training of regular education teachers to work with children with special needs in the regular classroom (pre-service and in-service).
- (3) Retraining of regular and special education teachers as Generic Special Teachers (with some emphasis on training of personnel currently employed in the public schools).
- (4) Preparation of teachers, paraprofessionals, and other support personnel to educate children with severe special needs (pre-service and in-service).
- (5) Special Education training for public school administrators in general and special education (with some emphasis on training of personnel currently employed in the public schools).
- (6) Field-based special education training for education personnel employed in integrated and specialized programs for young children with special needs.
- (7) Preparation of special education personnel from bilingual and minority groups.
- (8) Training to broaden competence of specialist personnel currently employed in public schools, institutional schools, collaboratives and private schools (e.g., speech, vision, psychology, guidance, physical education and recreation, etc.) including:
 - (a) retraining to respond to new role demands (e.g., functioning effectively as team members) and
 - (b) development of new skills.
- (9) Retraining of currently employed categorically trained teachers to function as resource room teachers (Moderate Special Needs) working with children with a variety of moderate special needs. (NOTE: This priority does not include preparation of new personnel in the area of Moderate Special Needs).

- (10)- Retraining of currently employed regular education teachers to function as resource room teachers (Moderate Special Needs) working with children with a variety of moderate special needs.
- (11)- Preparation of secondary level (Jr. and Sr. High) special education personnel.
- (12)- Preparation of special education personnel in the areas of vocational education and career education.
- (13)- Continuation of support for specialized programs which train personnel to work with children with low incidence handicaps, in response to regional and national needs. (Vision, Audition, and deaf-blind-multhandicapped).
- (14)- Training of parents and paraprofessionals to work with children with special needs; training of professionals to work effectively with parents of children with special needs and with paraprofessionals.

* NOTE: This priority must be addressed by all training grant proposals. Each applicant should include at least one support letter from a cooperating public school, collaborative or institutional school, in the grant application. All proposals should address at least one additional priority.

2 - Federal (Bureau of Education for the Handicapped - USOE) Special Education Training Priorities for 1977-78

Federal priorities and state priorities serve as a reference point for panels of experts who review EHA VI-D personnel preparation grant proposals submitted by Institutions of Higher Education, State Departments of Education and other agencies. Both Federal and State training priorities will be utilized by USOE-BEH panels in reviewing proposals for training funds (VI-D) to be submitted in October, 1976 for funding in 1977-78.

The Total VI-D Budget for the next funding year is approximately \$40 million. Another \$5 million may be appropriated specifically for in-service training.

Federal personnel preparation funding priorities, not listed in order of importance, and approximate funding levels are:

- 1 - Early Childhood Education - Age 0 - 6 years, with emphasis on infancy to three years - (\$ 6 million)
- 2 - Severely and Multi-handicapped, including low incidence disabilities (deaf-blind, multi-handicapped), severely handicapped profoundly retarded and emotionally disturbed (autistic), - 94-142 stipulates that funds for delivery of services to children should go first to the unserved children and the most severely handicapped children in each category.
- 3 - Paraprofessionals - (\$ 2 million)
- 4 - Physical Education for the Handicapped
- 5 - Therapeutic Recreation
- 6 - Interdisciplinary training - (\$ 600,000.)
- 7 - General Special Education - preparation of special educators - (\$ 8 million)
- 8 - Career and Vocational education - (\$ 2 million)
- 9 - Regular Education - pre-service or in-service training of regular education personnel (including physical education and recreation.) This priority relates to the 94-142 stipulation of the right to the least restrictive environment for each child. - (\$ 8 million)
- 10 - Developmental assistance - innovative post-Doctoral programs - (\$ 8 - 900,000.)
- 11 - Model implementation or Special Projects - (\$?)
- 12 - Volunteers, including parents - (\$ 1.5 million)

F - RECOMMENDATIONS

The following recommendations have been developed on the basis of information collected by the Manpower Project during its first year of operation. Although numerical data has contributed to formulation of these statements, they are based primarily on recommendations of members of various Project groups. In most instances, an informal concensus has developed after discussion of available data and related issues, problems and needs by various groups. Information collected by the Project evaluator has also been incorporated into these recommendations:

- 1 - The principle of free choice should govern career decisions by students, and program development decisions by institutions of higher education - but these decisions should be based on the most accurate information available.

The issue of free versus controlled decision-making has emerged frequently in discussions by various project groups. The recommendation stated above reflects a concensus on the part of representatives of many different sectors. This concensus was based on the belief that freedom of choice is (or should be) a basic element of a democratic society, and the assumption that individuals will make wise decisions if they are will-informed.

Corollaries of this recommendation are:

- a - High school students and students entering undergraduate and graduate education programs should be provided with career counseling, including information on the potential job market in their areas of vocational interest.
 - b - Data on current and projected manpower needs (supply/demand) in various areas of specialization - at state, regional, and national levels - should be made available to persons responsible for decisions governing higher education training program development and operation.
- 2 - The current and projected balance of personnel supply and demand must be assessed separately for each area of specialization.

While the logic of this statement will be immediately apparent to anyone who has read this report, many individuals and agencies have interpreted limited information to mean either that personnel shortages exist in all special education areas or that all are more than adequately supplied.

- 3 - Preparation programs should provide students with vocational options.

Graduates should be prepared to function in more than one role and more than one setting. For example, recent graduates of some special education training programs may be employed as regular classroom teachers, resource room teachers, or itinerant-consultant teachers, since they qualify for dual approval/certification.

- 4 - Institutions of higher education should continue to reorganize training programs to provide a common initial training base leading to specialization options in (a) regular education and special education, (b) various areas of special education, and (c) special education and related disciplines.

This recommendation is clearly related to the one regarding vocational options. In addition, this approach to training tends (a) to break down barriers between various specialization areas and to improve cross-disciplinary communication and cooperation and (b) to reduce duplication in training programs and increase efficient utilization of training resources.

- 5 - Training programs should continue to increase their commitment to meeting the substantial needs for in-service training which currently exist in public schools and other agencies.

The magnitude of needs for field-based in-service training of personnel employed in education and human services agencies has been stressed by members of Project groups, and by other individuals and organizations. Many Colleges/Universities are currently involved in short-term in-service training efforts (workshops and courses) and a number of institutions are also providing long-term (often 2 year duration) continuing education programs to prepare personnel for new roles. These efforts are commendable, and should be expanded, within the limits of available resources. Many training programs are utilizing qualified adjunct faculty, from public schools and other agencies, to increase their capacity for in-service training.

- 6 - Additional structures and strategies should be developed to support interinstitutional and interagency collaboration and sharing of training resources.

This recommendation includes development of consortia for pre- and in-service training, involving such diverse agencies as higher education institutions, public, private and institutional schools, collaboratives and public and private human services agencies. Resources to be shared include personnel, programs, curricula and other materials.

- 7 - Personnel preparation programs should be developed in response to documented needs - at state, regional and/or national levels, as appropriate for different areas of specialization.

Two contrasting perspectives are combined in this statement. On the one hand, new programs should be developed to respond to unmet and emerging needs. On the other hand, decisions to develop new programs should be based on documented needs. The level at which needs should be documented depends on the geographic area primarily served by the program. Programs which prepare personnel for higher incidence special needs, should document needs at state, or in some instances, at sub-state regional levels. Programs which prepare personnel for low incidence areas and other specialized programs which expect to place most graduates out-of-state, should document needs at regional or national levels.

8 - Personnel preparation should be viewed as a lifelong process.

This recommendation has emerged in several different contexts:

- a - the need to provide opportunities for high school students to work with individuals with special needs (whether or not they plan to enter a special education field).
- b - the need to provide career ladders in various areas of specialization
- c - the need to provide all personnel, from paraprofessionals to higher education faculty, with opportunities for continuing personnel and professional growth.

9 - The efficiency of existing personnel placement systems should be substantially improved or effective alternatives to existing systems should be developed.

Both personnel selection and location of positions can be extremely time consuming. The majority of administrators would prefer to improve upon an existing system, but some would prefer development of an alternative system. Students in training and currently unemployed personnel stress their need for more effective placement systems at both state and national levels. An improved personnel placement system would help to ensure that available qualified personnel resources are efficiently utilized, i.e., matched with existing positions.